



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/819,612

03/29/2001

Akio Suto

Q60558

4173

7590 03/19/2008
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

LEROUX, ETIENNE PIERRE

ART UNIT

PAPER NUMBER

2161

MAIL DATE

DELIVERY MODE

03/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte AKIO SUTO

Appeal 2008-0872
Application 09/819,612¹
Technology Center 2100

Decided: March 19, 2008

Before HOWARD B. BLANKENSHIP, JEAN R. HOMERE, and
ST. JOHN COURTENAY III, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Examiner's rejection of claims 1 through 19. Appellant presented oral arguments on March 12, 2008. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

¹ Filed on Mar. 29, 2001. The real party in interest is Fuji Photo Film, Co. Ltd. of Japan.

The Invention

Appellant invented a method and system for allowing a plurality of clients (20, 22, 24, 26, 30, 32) to perform distributed data processing at a plurality of servers (12, 14). As depicted in Figure 1, upon a client's updating of a database (122) located at a first server (12), a replication trigger generator (132) contained in the first server (12) generates a replication trigger based on the update. Then, the replication trigger update is forwarded to an updating information transfer unit (130) in the first server (12) to transfer the updated information to a database (142) contained in a second server (14). (Spec. 10-11.)

An understanding of the invention can be derived from exemplary independent claim 1, which reads as follows:

1. A distributed data processing system comprising a plurality of servers and a plurality of clients connected to the servers for performing a distributed data processing process on an object to be controlled,

each of said servers comprising:

a database memory for storing a database which is updated by the distributed data processing process performed by said clients;

a replication trigger generator for generating a replication trigger based on the updating of said database by the distributed data processing process performed by said clients connected to one of the servers;

an updating information transfer unit for transferring updating information of said database to another one of the servers based on said replication trigger;

a database updating processor for updating said database based on the updating information transferred from the other server; and

an archive data memory for storing updating information of said database as archive data;

wherein at least part of said database is recovered using said archive data.

In rejecting the claims on appeal, the Examiner relied upon the following prior art:

Nakamura	US 5,347,463	Sep. 13, 1993
Makinen	US 5,758,068	May 26, 1998
Nguyen	US 6,202, 070	Mar. 13, 2001
Mayhead	US 6,367,029	Apr. 02, 2002

(filed Nov. 3, 1998)

The Examiner rejected the claims on appeal as follows:

1. Claims 1, 2, 7 through 9, and 16 through 19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Mayhead.
2. Claims 3, 4, 10 through 12, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Mayhead and Makinen.
3. Claims 5 and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Mayhead and Nakamura.
4. Claims 13 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Mayhead and Nguyen.

FINDINGS OF FACT

The following findings of fact (FF) are supported by a preponderance of the evidence.

Mayhead

1. As depicted in Figure 1, Mayhead discloses a file server system (60) having a plurality of nodes for separately storing in each of said nodes software and hardware components that can be accessed by a plurality of client computers (50, 52, 54). (Col. 2, ll. 17-28.) The nodes of the file server system act as hosts for the software components including the system file store. (Col. 2, l. 65- col. 3, l. 18.)

2. As shown in Figure 2, the file server system (60) includes a primary file store (1) located at a first node and a back up copy of the primary file (secondary file store (2)) located at a second node. It also includes a replication manager (8) having its instances distributed in each of the nodes to maintain *coherence* between said nodes. (Col. 3, ll. 18-27.)

3. Upon receiving a read or write request from a client, the file server system performs a *consistency* check by having the replication manager (8) inform a logger (10) and checker (4) units of the request. Then, the primary store forwards a replication request to the backup store which updates its file and subsequently executes the request. (Col. 8, ll. 23-44.)

PRINCIPLES OF LAW ANTICIPATION

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76 (Fed. Cir. 2005), citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565 (Fed. Cir. 1992). Anticipation of a patent claim requires a finding that the claim at issue “reads on” a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346 (Fed Cir. 1999) (“In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.”) (internal citations omitted).

OBVIOUSNESS

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner’s position. *See In re Kahn*, 441 F.3d 977, 985-86

(Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

The Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966), stated that the following factual inquiries underpin any determination of obviousness:

Under § 103, [1] the scope and content of the prior art are to be determined; [2] differences between the prior art and the claims at issue are to be ascertained; and [3] the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such (4) secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Where the claimed subject matter involves more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, a holding of obviousness must be based on “an apparent reason to combine the known elements in the fashion claimed.” *KSR Int’l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41 (2007). That is, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.*, 127 S. Ct. at 1741, (quoting *In re Kahn*, 441 F.3d 977,

988 (Fed. Cir. 2006)). Such reasoning can be based on interrelated teachings of multiple patents, the effects of demands known to the design community or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art. *KSR*, 127 S. Ct. at 1740-41.

ANALYSIS

Claims 1, 2, 7-9, 16-19

Independent claims 1 and 7 recite in relevant part generating a replication trigger based on a client's update of a database at a first server to thereby update a database at a second server. (App. Br., Claims Appendix.) Appellant argues that Mayhead does not teach that limitation. Particularly, Appellant submits that Mayhead discloses an intra-server communication system having a replication manager, which replicates information between a primary file store to a back up file store. However, Appellant argues that Mayhead's teaching is limited to a single server, and it is silent on whether the replication is performed in response to a replication trigger signal caused from a database update. (App. Br. 13-14.)

The Examiner, in response, avers that Mayhead discloses a replication manager that decides when to replicate files of a primary store in a secondary backup store. The Examiner consequently concludes that the replication manager teaches the claimed replication trigger generator. (Ans. 15-18.)

Therefore, the pivotal issue before us is whether one of ordinary skill in the art would find that the replication manager in Mayhead's file server system teaches a replication trigger generator as claimed. We answer this inquiry in the affirmative.

As detailed in the findings of facts section above, Mayhead discloses a file server system having a plurality of nodes, wherein a replication manager replicates in a secondary backup database located in a second node files of a primary database located in a first node. (FF. 2.) Further, Mayhead discloses that each of the nodes includes instances of the *replication manager to maintain coherence between said nodes*. (*Id.*) Additionally, Mayhead discloses that upon receiving a read/write request at the file server system, the primary store *performs a consistency check*. Then, the replication manager sends the request to the secondary backup database to update its files, and to process the request. (FF. 3.) One of ordinary skill in the art would readily recognize that the primary node and the secondary node in the file server system that separately house the primary database and the secondary backup database respectively each include at least one processor. This is evident from the fact that each of these nodes, upon being queried, can independently process a request to provide a result. Further, the ordinarily skilled artisan would also recognize that using a single processor access two separate databases located at different nodes would defeat the overarching goal of Mayhead, which is to increase data availability and fault tolerance. In other words, using a single processor to field and process requests from and to all the nodes would create a bottleneck situation. It

would further cause the availability of the entire system to depend solely on that single processor. Clearly, this is not the case here in Mayhead. Therefore, the ordinarily skilled artisan would recognize that each of the nodes in the file server subsystem includes a server for processing requests and updates received from the client and the replication manager. In addition to the processor, the ordinarily skilled artisan would recognize that each of said servers includes an instance of the replication manager and a data store.

Furthermore, the ordinarily skilled artisan would also recognize Mayhead's teaching of including an instance of the replication manager in each of the nodes to maintain coherence between them as an indication that it seeks to keep the nodes in sync with one another. Particularly, when it comes to the two nodes that house the primary and secondary databases, the ordinarily skilled artisan would appreciate that in order to keep these nodes coherent, upon updating one node, the other one should be updated as well. This teaching is further reinforced by Mayhead's disclosure of the replication manager updating a secondary node upon the primary node's receiving a request from a client in order to foster consistency between said nodes. Therefore, the ordinarily skilled artisan would appreciate that Mayhead's replication manager instructs the secondary node where the backup database is located to update its file in order to remain consistent and coherent with the database in the primary node. It follows that Appellant has not shown that the Examiner erred in finding that Mayhead anticipates independent claims 1 and 7.

Regarding claim 19, Appellant argues that Mayhead does not teach updating the database prior to generating the trigger. (App. Br. 15.) We do not agree. One of ordinary skill would recognize that in order to maintain *coherence or consistency* between the two nodes housing the primary database and the secondary backup database, one node has to be first updated before the updated data can be replicated in the other node. Particularly, when an update occurs in one of the two nodes, the replication manager will detect that an inconsistency or incoherence has arisen between the data in the two nodes, and it will therefore forward a message to the other node to replicate said updated data to restore the consistency and coherence between said nodes. Therefore, Mayhead teaches updating a database at a first node before sending a message to another database at a second node to update its files. It follows that Appellant has not shown that the Examiner erred in finding that Mayhead anticipates claims 19.

Appellant did not provide separate arguments with respect to the rejection of dependent claims 2, 8, 9, and 16 through 18. Therefore, we select independent claim 1 as being representative of the cited claims. Consequently, these dependent claims fall together with representative claim 1. 37 C.F.R. § 41.37(c)(1)(vii).

Claims 3 through 6, 10 through 15

Appellant argues that neither Makinen, nor Nakamura, nor Nguyen cures the deficiencies of Mayhead as argued for independent claims 1 and 7.

(App. Br. 16-17.) We have already addressed Appellant's arguments regarding these independent claims. We find no such deficiencies in Mayhead for these secondary references to cure. It follows that Appellant has not shown that the Examiner erred in concluding that the separate combinations of Mayhead with Makinen, Nakamura, and Nguyen renders claims 3, 4, 10 through 12 and 14, claims 5 and 6, and claims 13 and 15, respectively, unpatentable.

CONCLUSION OF LAW

Appellant has not shown that the Examiner erred in concluding that:

1. Mayhead anticipates claims 1, 2, 7 through 9, and 16 through 19 under 35 U.S.C. § 102(e).
2. The combination of Mayhead and Makinen renders claims 3, 4, 10 through 12, and 14 unpatentable under 35 U.S.C. § 103(a).
3. The combination of Mayhead and Nakamura renders claims 5 and 6 unpatentable under 35 U.S.C. § 103(a).
4. The combination of Mayhead and Nguyen renders claims 13 and 15 unpatentable under 35 U.S.C. § 103(a).

DECISION

We affirm the Examiner's decision rejecting claims 1 through 19.

Appeal 2008-0872
Application 09/819,612

Appeal 2008-0872
Application 09/819,612

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

clj

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213